



Rocky Mountain
Remediation Services, L.L.C.
... protecting the environment

PROCEDURE

AIR MONITORING AND PARTICULATE CONTROL

Procedure No. FO.1

Revision 3

Date Effective: 03/14/97

APPROVED: _____

Ann Tyson, Vice President, Environmental Restoration

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1.0 PURPOSE

This document contains general guidelines for wind speed monitoring and total suspended particulates (particulate) control for the purpose of protecting personnel, equipment and the environment. This procedure can be used to support the development of, and be used in conjunction with site specific health and safety documentation to implement air monitoring at the project site. Specific controls are project, time and weather dependent.

This procedure implements portions of Shift Superintendent's Standard Operating Procedures, No.SS-7, High Wind/Tornado Response; Site procedure Air Sampling, 4-V80-ROI-04.02; 29 CFR 1910.1000, Air Contaminants; and 10 CFR 835, Occupational Radiation Protection.

2.0 SCOPE

This document applies to RMRS personnel and subcontractors conducting work at Rocky Flats Environmental Technology Site (RFETS).

Wind speed monitoring will be conducted during outdoor work to protect personnel from physical injury due to windblown debris, falls from roofs or ladders and elevated work surfaces, and the increased hazard posed by cold stress. In addition, wind speed will be monitored during drilling, demolition, or other particulate generating activities such as excavating and earth moving in order to quantify and control potential personnel and environmental exposures to suspended particulates that may contain hazardous substances. In addition, controls will be established to minimize suspension of particulates.

3.0 REQUIREMENTS

The following sections identify the prerequisites and guidelines/instructions for performing work outdoors when wind speed and/or particulate suspension is a factor.

3.1 Prerequisites

The following equipment is required, where applicable, according to the site specific Health and Safety Plan, Radiological Work Permit, Integrated Work Control Plan, Soil Disturbance Permit or other appropriate guidance document:

- Portable wind anemometers or verification of wind speed from the Shift Superintendent: phone X2914 or radio channel 3301.
- Low volume (Lo-Vol)/high volume (Hi -Vol) radiological air samples (i.e. personal, portable and stationary).

ADMIN RECORD

A-SW-002328

- Particulate control/suppression equipment (i.e. water misters, commercial soil coverings and tarpaulins) particulate monitoring equipment (e.g., Miniram PDM-3 or equivalent).

3.2 Guidelines/Instructions

The following subsection lists guidelines/instructions for performing work outdoors when wind speed and/or particulate suspension are a factor. Appropriate soil and contaminant dispersion control may be required. Control measures may include:

- Wind speed measurements
- Soil moisture evaluation
- Water spray soil applications
- Soil/waste pile covering
- General administrative control measures
- Particulate monitoring

Activities associated with this procedure will be documented in the field supervisors logbook.

3.2.1 Wind Speed

Wind speed will be evaluated as part of all earth moving operations. In addition, all work will be regulated by the RFETS Shift Superintendent's Standard Operating Procedures, No.SS-7, High Wind/Tornado Response.

Wind speed will be monitored during outside work activities. Two options are available for obtaining wind speed data.

- Placement of wind anemometers in a representative location at the work site to obtain localized wind speed data,
- Contacting the shift superintendent whenever windy conditions develop to obtain up-to-date wind speed information.

Phone: X2914
Radio Channel: 3301

The following table lists hazards and controls associated with working in windy environments in excess of 15 miles per hour (mph).

WIND SPEED			
Hazard	Action Level	Action(s) to be Taken	Monitoring Frequency
Contamination dispersion	>15 mph average for two consecutive 15 minute periods	At the discretion of the Project Manager and the Site Safety Officer	Continuous during all field activities
Contamination dispersion	>30 mph average for two consecutive 15 minute periods	Terminate particulate generating activities	Continuous during all field activities
Personnel injury	>45 mph average for two consecutive 15 minute periods	Secure area and terminate field operations	Continuous during all field activities

Work stoppages initiated as a result of wind speeds at 30 mph or less for two consecutive 15 minute periods may be restarted based on concurrence of the field supervisor and health and safety officer. Work Stoppages initiated because of wind speeds in excess of 30 mph will require average wind speed readings over a 15 minute period to be reduced to 30 mph or less (as determined/concurred by the field supervisor and health and safety officer), prior to restart. These work stoppage/restart requirements do not supersede RFETS Shift Supervisor directives.

3.2.2 Moisture Evaluation and Particulate Suppression

The project field supervisor will be responsible for evaluating soil moisture conditions whenever earth moving activities are conducted. The field supervisor will insure that the soil is relatively moist when soil is being moved to minimize the suspension of particulates. Water sprays and misters may be used to moisten soil and other media that may otherwise result in suspension of particulates when disturbed. Stockpiled soil or media may be covered with tarpaulins or commercially available sprayed-on products to mitigate the suspension of particulates during stockpiling activities. During short term stockpiling operations water sprays may be applied to inhibit wind erosion, as long as a moist surface can be assured during the short term operation. The use of particulate monitoring equipment may be used to verify the effectiveness of the particulate suppression methods.

3.2.3 General Administrative Control Measures

Work site administrative control measures will be used to minimize suspension of particulate. These controls include, but are not limited to:

- Limiting vehicular speeds such that excessive particulates are not suspended.
- Careful control and dumping of excavated material to minimize particulate suspension.
- Use of water sprays during earth moving activities as described in the previous subsection.

It is the responsibility of all project personnel to minimize suspension of particulates at the work site.

3.2.4 Particulate Monitoring

As stipulated by the project specific plans, particulate monitoring may be required. Particulate monitoring will be performed in accordance with the Site procedure Air Sampling, 4-V80-ROI-04.02. The procedure provides instructions for:

- Determining the appropriate type of air sampling required for a specific application.
- General use of air samplers used at RFETS.
- Changing filter media of air samplers used at RFETS.
- Field screening and analysis of air samples.
- Calibrating air flow rates of specified air samplers or verification of air sampler calibration.
- Issuing and maintaining required air sampling reports/data.
- Packaging air samples for transport to the Air Filter Counting Facility.

Supplemental project specific directives may be issued by Radiological Engineering or other controlling organization, on a case-by-case basis to further stipulate air monitoring requirements. Air monitoring will be performed in accordance with the project specific directives.

4.0 RECORDS

The following records generated during the performance of this procedure must be controlled as follows:

<u>Document</u>	<u>Record Type</u>	<u>Disposition</u>
Field Supervisors Logbook	QA	Becomes part of the Project File
Records associated with Site procedure 4-V80-ROI-04.02	QA	Maintain records in accordance with 1-V41-RM-001, Records Management Guidance for Records Sources, and 3-127-RP-2001, Guidance for Management of Records in Radiological Control. In addition, copies will be obtained for the RMRS Project File.
• Air Sample Travel Log		
• Record of Special Analysis Air Samples		
• Fixed Air Sampler Calibration Sheet		

5.0 REFERENCES

- 5.1 Shift Superintendent's Standard Operating Procedures, No.SS-7, High Wind/Tornado Response
- 5.2 Site procedure Air Sampling, 4-V80-ROI-04.02
- 5.3 10 CFR 835, Occupational Radiation Protection.
- 5.4 29 CFR 1910.1000, Air Contaminants
- 5.5 Colorado Air Quality Control Commission, Regulation NO.1, Emission Control Regulation for Particulates, Smokes, Carbon Monoxide and Sulfur Oxides
- 5.6 DOE Order 5400.5, Radiation Protection of the Public and the Environment